



DOCKET NO: V0189.70018US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

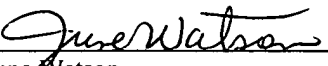
Patent No.: US 6,833,250 B2
Issue Date: December 21, 2004
Patentee: Barb Ariel Cohen
Serial No: 09/759,815
Confirmation No: 2715
Filed: January 10, 2001
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A BIOLOGICAL SAMPLE

Certificate
FEB 01 2005
of Correction

Examiner: Ralph J. Gitomer
Art Unit: 1651

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 24th day of January, 2005.


June Watson

Mail Stop Certificate of Correction
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR ENTRANCE OF CERTIFICATE OF CORRECTION
UNDER 35 U.S.C. §254 and §255

Sir/Madam:

Patentee respectfully requests the correction of errors in the printing of the above-captioned patent. Specifically, the inventors are incorrect, and claim 33 has two typographical errors made by the Patent Office. Please correct as follows:

Inventors:

There should only be one inventor listed, "Barb Ariel Cohen"; all others should be deleted. Enclosed is a copy of a Petition to correct Inventorship Under 37 CFR §1.48(b) which was filed on February 14, 2003. The petition was accepted by the U.S. Patent and Trademark Office as indicated in the Office Action of April 2, 2003.

Claims:

In Column 24, line 17, delete "*Stemphyliuin*" and replace with --*Stemphylium*--.
In Column 24, line 18, delete "*Altemaria*" and replace with --*Alternaria*--.

Patentee points out that the corrections requested do not involve change in the patent that constitutes new matter or would require reexamination, and therefore, respectfully request that a certificate of correction be issued. Patentee encloses a copy of the issued patent with the errors highlighted. Since the error was made by the Patent Office, it is respectfully submitted that no fee is due. However, if the Examiner deems a fee necessary, the fee may be charged to Deposit Account No. 23/2825. Should any questions arise concerning the foregoing, please contact the undersigned at the telephone number listed below.

For the reasons stated above, Patentee respectfully requests entrance of the enclosed Certificate of Correction.

Respectfully submitted,



John R. Van Amsterdam, Reg. No. 40,212
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 646-8000

Docket No. V0189.70018US00
Date: January 21, 2005
xNDD



DOCKET NO: V0189.70018US00


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: US 6,833,250 B2
Issue Date: December 21, 2004
Patentee: Barb Ariel Cohen
Serial No: 09/759,815
Confirmation No: 2715
Filed: January 10, 2001
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A BIOLOGICAL SAMPLE

Examiner: Ralph J. Gitomer
Art Unit: 1651

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 21st day of January, 2005.


June Watson

Mail Stop Certificate of Correction

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following document(s):

- ☒ Request for Entrance of Certificate of Correction Under 35 U.S.C. §254 & §255
- ☒ Certificate of Correction - Form PTO-1050
- ☒ Copy of pertinent pages from U.S. Patent No. US 6,833,250 B2
- ☒ Copy of Petition to Correct Inventorship Under 37 CFR §1.48(b) previously filed
- ☒ Return Receipt Postcard

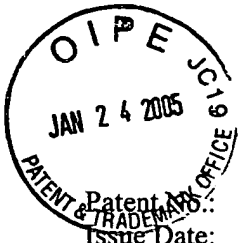
If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617) 646-8000, Boston, Massachusetts.

No fee is enclosed. If a fee is necessary, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,


John R. Van Amsterdam, Reg. No. 40,212
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 646-8000

Docket No. V0189.70018US00
Date: January 21, 2005
xNDD



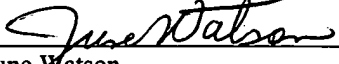
DOCKET NO: V0189.70018US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: US 6,833,250 B2
Issue Date: December 21, 2004
Patentee: Barb Ariel Cohen
Serial No: 09/759,815
Confirmation No: 2715
Filed: January 10, 2001
For: DETECTION AND REMOVAL OF CHITINOUS MATERIAL IN A BIOLOGICAL SAMPLE
Examiner: Ralph J. Gitomer
Art Unit: 1651

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 21st day of January, 2005.


June Watson

Mail Stop Certificate of Correction

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following document(s):

- ☒ Request for Entrance of Certificate of Correction Under 35 U.S.C. §254 & §255
- ☒ Certificate of Correction - Form PTO-1050
- ☒ Copy of pertinent pages from U.S. Patent No. US 6,833,250 B2
- ☒ Copy of Petition to Correct Inventorship Under 37 CFR §1.48(b) previously filed
- ☒ Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617) 646-8000, Boston, Massachusetts.

No fee is enclosed. If a fee is necessary, the Commissioner is hereby authorized to charge Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,


John R. Van Amsterdam, Reg. No. 40,212
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 646-8000

Docket No. V0189.70018US00
Date: January 21, 2005
xNDD

2 FEB 2005

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : US 6,833,250 B2
DATED : December 21, 2004
INVENTORS : Barb Ariel Cohen

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(75) Inventors: **Barb Ariel Cohen**, Watertown, MA (US)

In the claims:

Claim 33,

In Column 24, line 17, delete "*Stemphyliuin*" and replace with --*Stemphylium*--.

In Column 24, line 18, delete "*Altemaria*" and replace with --*Altemaria*--.

MAILING ADDRESS OF SENDER:

John R. Van Amsterdam
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211

PATENT NO. US 6,833,250 B2

 **2 FEB 2005**



US006833250B2

(12) **United States Patent**
Potts et al.

(10) Patent No.: **US 6,833,250 B2**
(45) Date of Patent: **Dec. 21, 2004**

(54) **DETECTION AND REMOVAL OF
CHITINOUS MATERIAL IN A BIOLOGICAL
SAMPLE**

(75) Inventors: ~~Steven J. Potts, Davis, CA (US);~~
~~David C. Slaughter, Davis, CA (US);~~
~~James F. Thompson, Sacramento, CA~~
~~(US); Jennifer J. Payne, Davis, CA~~
~~(US); Barb Arlet Cohen, Watertown,~~
MA (US)

(73) Assignee: Vicam, L.P., Watertown, MA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 79 days.

(21) Appl. No.: 09/759,815

(22) Filed: Jan. 10, 2001

(65) Prior Publication Data

US 2002/0107179 A1 Aug. 8, 2002

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/519,533, filed on
Mar. 6, 2000.

(51) Int. Cl.⁷ C12Q 1/04

(52) U.S. Cl. 435/34; 435/18

(58) Field of Search 435/34, 18; 436/827;
530/370

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,289,747 A	9/1981 Chu
4,493,793 A	1/1985 Chu
4,526,871 A	7/1985 Avrameas et al.
4,659,658 A	4/1987 McCarthy et al.
5,250,410 A	10/1993 Slifkin
5,587,292 A	12/1996 Laine
5,914,239 A	6/1999 Laine
6,121,420 A	9/2000 Laine

OTHER PUBLICATIONS

Gourama H. Detection of Molds in Foods and Feeds. *J of Food Protection* 58(12)1389-1394 1995.*

Cousin M. Chitin as a Measure of Mold Contamination of Agricultural Commodities and Foods. *J of Food Protection* 59(1)73-81, 1995.*

Potts S. A Fluorescent Lectin Test for Mold in Raw Tomato Juice. *J of Food Science* 65(2)346-350 2000.*

Baldo B. Lectins as Cytochemical Probes of the Developing Wheat Grain. *Australian J Plant Physiol* 9 663-75, 1982.*

Cousin (1996) "Chitin as a Measure of Mold Contamination of Agricultural Commodities and Foods." *J. Food Protection*, 59:73-81.

Gourama and Bullerman (1995) "Detection of Molds in Foods and Feeds: Potential Rapid and Selective Methods." *J. Food Protection*, 58:11389-1394.

Jarvis (1977) "A chemical method for the estimation of mould in tomato products." *J. Food Technology*, 12:581-591.

Jarvis and Williams (1987) "Method for Detecting Fungi in Foods and Beverages." *Food and Beverage Mycology*, 2nd ed., Editor L.R. Beuchat, Van Nostrand Reinhold, New York, pp. 599-636.

Jarvis et al., (1983) "Observations on the enumeration on moulds in food and feedingstuffs" *J. Appl. Bacteriol.* 55:325-336.

Lin & Cousin (1985) "Detection of Mold in Processed Foods by High Performance Liquid Chromatography." *J. Food Protection*, 48:671-678.

Lis & Sharon (1986) "Lectins as Molecules and as Tools." *Ann. Rev. Biochem.*, 55:35-67.

Patel (1992) "The applications of lectins in food analysis." *Trends in Food Sci. & Technol.* 3:35-39.

Patel et al., (1993) "Rapid Separation and Detection of Foodborne Yeasts and Moulds by Means of Lectins." In *New Techniques in Food and Beverage Microbiology*, pp. 31-41, Knoll, R.G., Gilmour, A., and Sussman, M., Eds. Blackwell Science Inc. Oxford, England.

Ride and Drysdale (1972) "A rapid method for the chemical estimation of filamentous fungi in plant tissue." *Physiol. Plant Pathol.* 2:7-15.

Stoddart and Herbertson (1978) "The Use of Fluorescein-labeled Lectins in the Detection and Identification of Fungi Pathogenic for Man: A Preliminary Study." *J. Med. Microbiol.* 11:315-324.

Battilani et al. (1996) "Fungal Growth and Ergosterol Content in Tomato Fruits Infected to Fungi." *Ital. J. Food Science* 4:283-289.

Eisenburg (1952) "Observations and Suggestions on Factory Control of Rot and Extremous Matter in Tomato Products." *Nat. Can Assoc., Inc. Let No.* 1371.

Howard (1911) "Tomato Ketchup Under the Microscope: With Practical Suggestions to Insure a Cleanly Product." *U.S. Dept. Agr. Bureau of Chemistry*, Circular No. 68.

Sharma, P.D. et al. (1977) "Critique of the Chitin Assay Technique for Estimation of Fungal Biomass." *Trans. Br. Mycol. Soc.* 69:479-483.

Williams (1968) "The Detection of Rot in Tomato Products." *J. Ass. Pub. Analysts*, 6:69-84.

Potts et al. (2000) "A Fluorescent Lectin Test for Mold in Raw Tomato Juice." *Journal of Food Science*, vol. 65, No. 2: 346-350.

* cited by examiner

Primary Examiner—Ralph Gitomer

(74) Attorney, Agent, or Firm—Wolf, Greenfield & Sacks, P.C.

(57) **ABSTRACT**

This invention provides novel methods for the detection of chitinous contaminants of non-chitinous biological materials. The methods are accurate, highly reproducible, rapid and relatively inexpensive. The methods are well suited to commercial applications, particularly in the food and agriculture industry where biological materials (e.g. food products) are regularly screened for contaminants (e.g. insect, mold, fungus, etc.). In one embodiment, the methods involve contacting a biological sample with a probe that is a lectin that binds chitin, contacting the sample with a pectinase; and detecting binding of said lectin to a chitin where the binding indicates the presence of chitin in the biological sample.

46 Claims, 7 Drawing Sheets

11. The method of claim 1, wherein said method further comprises contacting said sample with a blocking reagent.

12. The method of claim 11, method wherein said blocking reagent is serum albumin.

13. The method of claim 1, wherein said chitin degradation product is N-acetyl D-glucosamine.

14. The method of claim 1, wherein said lectin is labeled with a detectable label.

15. The method of claim 14, wherein said label is selected from the group consisting of a radioactive label, a magnetic label, a colorimetric label, an enzymatic label, a fluorescent label, a metal, an antibody, a biotin, and an avidin or streptavidin.

16. The method of claim 14, wherein said label is a fluorescent label.

17. The method of claim 16, wherein said detecting comprises using a fluorometer to detect fluorescence of said label.

18. The method of claim 17, wherein said fluorometer uses a bandpass filter.

19. The method of claim 17, wherein said fluorometer is a surface-reading fluorometer.

20. The method of claim 17, wherein said fluorometer is a surface-reading fluorometer.

21. The method of claim 16, wherein said detecting comprises using a fluorometer to detect fluorescence of said label.

22. The method of claim 14, wherein said label is selected from the group consisting of a radioactive label, a magnetic label, a colorimetric label, an enzymatic label, a fluorescent label, a metal, an antibody, a biotin, and an avidin or streptavidin.

23. The method of claim 14, wherein said label is a fluorescent label.

24. The method of claim 1, wherein said method is performed at a pH greater than about pH 7.

25. The method of claim 1, wherein said method is performed at about pH 8.

26. The method of claim 1, wherein said pectinase comprises an enzyme selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases, and hemicellulases.

27. The method of claim 1, wherein the processed biological sample is a sample that has been subjected to an operation selected from the group consisting of comminuting, homogenizing, heating, evaporation, lyophilization, filtering, concentrating, fermenting, freezing, and blanching.

28. The method of claim 1, wherein the biological sample is selected from the group consisting of a fruit, a vegetable, a fruit juice, and a vegetable juice;

said lectin is a fluorescently labeled lectin selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein;

said pectinase is a pectinase selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases and hemicellulases;

said sample is processed by an operation selected from the group consisting of comminuting, homogenizing, heating, evaporation, lyophilization, filtering, concentrating, fermenting, freezing, and blanching; and said detecting comprises detecting a signal from the fluorescent label labeling said lectin.

29. A method of detecting chitinous material in a non-chitinous biological sample, said method comprising in a solution at a pH ranging from about pH 7 to about pH 9 contacting said biological sample with a fluorescently labeled probe that is a lectin that binds chitin;

filtering said sample;

washing said filter to remove unbound lectin;

eluting bound lectin with a chitin, a chitin degradation product or a chitin analogue; and

detecting said lectin wherein detection of said lectin indicates the presence of chitinous material in said biological sample.

30. The method of claim 29, wherein said chitin comprises an insect or insect part.

31. The method of claim 29, wherein said chitin is a component of a microorganism.

32. The method of claim 31, wherein said microorganism is selected from the group consisting of a fungus, a mold, and a yeast.

33. The method of claim 31, wherein said microorganism is a fungus selected from the group consisting of *Cladosporium herbarum*, *Fusarium oxysporum*, and *Stemphylium botryosum*, *Attemaria alternata*, *Geotrichum candidum*, *Rhizopus stolonifer*, *Botrytis cinerea*, *Phytophthora parasitica*, *Pythium aphanidermatum*, *Pythium ultimum*.

34. The method of claim 29, wherein said biological sample is selected from the group consisting of an agricultural product, a food product, a wood product, a textile, and an animal tissue product.

35. The method of claim 34, wherein said agricultural product is selected from the group consisting of consisting of a fruit, a vegetable, a grain, forage, a silage, a juice, a wood, a flower, and a seed.

36. The method of claim 34, wherein said agricultural product is a fruit selected from the group consisting of a fruit, a vegetable, a grain, forage, a silage, a juice, a wood, a flower, and a seed.

37. The method of claim 29, wherein said lectin is selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein.

38. The method of claim 29, wherein said method further comprises contacting said sample with a blocking reagent.

39. The method of claim 38, wherein said blocking reagent is serum albumin.

40. The method of claim 29, wherein said chitin degradation product is N-acetyl D-glucosamine.

41. The method of claim 29, wherein said lectin is labeled with a detectable label.

42. The method of claim 29, wherein said method is performed at a basic pH greater than about pH 7.5.

43. The method of claim 29, wherein said method is performed at a basic pH about pH 8.0.

44. The method of claim 29, wherein

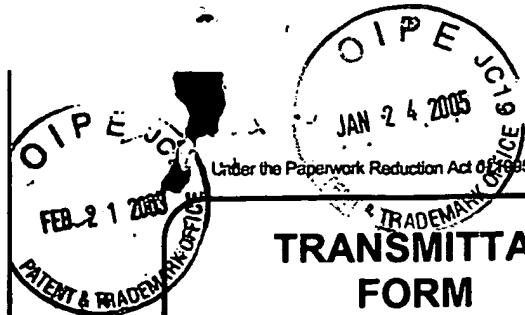
the biological sample is selected from the group consisting of a fruit, a vegetable, a fruit juice, and a vegetable juice; said lectin is a fluorescently labeled lectin selected from the group consisting of wheat germ agglutinin (WGA), succinylated WGA, pokeweed lectin, tomato lectin, potato lectin, barley lectin, rice lectin, stinging nettle lectin, a vicilin, a chitovibrin, a Vibrio lectin, and a hevein; and

said detecting comprises detecting a signal from the fluorescent label labeling said lectin.

45. The method of claim 29, further comprising contacting said biological sample with a pectinase.

46. The method of claim 45, wherein said pectinase is selected from the group consisting of polygalacturonases, pectinesterases, pectin lyases and hemicellulases.

Stemphylium
ALTERNARIA



U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

COPY RECEIVED
FEB 28 2003
TECH CENTER 1600/2900

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/759,815
Filing Date	January 10, 2001
First Named Inventor	Potts
Art Unit	1627
Examiner Name	Ralph J. Gitomer
Attorney Docket Number	023070-130610US
Total Number of Pages in This Submission	

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Return Postcard Petition to Correct Inventorship
Remarks		The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Townsend and Townsend and Crew LLP Matthew E. Hinsch	Reg. No. 47,651
Signature		
Date	February 14, 2003	

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: February 14, 2003			
Typed or printed	Joy M. Marshall		
Signature		Date	February 14, 2003

This collection of information is part of the U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.
SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

SF 1433106 v1

FEE TRANSMITTAL for FY 2003

Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 130

Complete If Known

Application Number 09759,815
Filing Date January 10, 2001
First Named Inventor Potts
Examiner Name Ralph J. Gitomer
Group Art Unit 1827
Attorney Docket No. 023070-130810US

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None
☒ Deposit Account:

Deposit
Account
Number

20-1430

Deposit
Account
Name

Townsend and Townsend and Crew LLP

The Commissioner is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fees from below		Fee Paid
Total Claims	<input type="text"/>	**	=	<input type="text"/>	X <input type="text"/>	= <input type="text"/>
Independent Claims	<input type="text"/>	**	=	<input type="text"/>	X <input type="text"/>	= <input type="text"/>
Multiple Dependent					X <input type="text"/>	= <input type="text"/>

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	2053	65	Non-English specification	
1812	2,520	2812	1,260	For filing a request for reexamination	
1804	920*	2804	460*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	2805	920*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	2451	755	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	2460	65	Petitions to the Commissioner	130
1807	50	2807	25	Petitions related to provisional applications	
1808	180	2808	90	Submission of Information Disclosure Stmt	
8021	40	28021	20	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	2802	450	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3)

(\$)130

SUBMITTED BY

Complete (if applicable)

Name (Print/Type) Matthew E. Hinsch Registration No. (Attorney/Agent) 47,651 Telephone 415-578-0200
Signature [Signature] Date February 14, 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Attorney Docket No.: 023070-130610US ^{PATENT} 3-11-03

Assistant Commissioner for Patents
Washington, D.C. 20231

On February 14, 2003

TOWNSEND and TOWNSEND and CREW LLP

By: Jay M. Marshall

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Potts et al.

Application No.: 09/759,815

Filed: January 10, 2001

For: THE DETECTION AND
REMOVAL OF MICROORGANISM
CONTAMINATION

Examiner: Ralph J. Gitomer

Art Unit: 1627

PETITION TO CORRECT
INVENTORSHIP UNDER
37 CFR § 1.48(b)

Assistant Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Applicants petition under 37 CFR § 1.48(b) to remove Steven J. Potts, David C. Slaughter, James F. Thompson and Jennifer J. Payne as inventors to the above-identified patent application.

The above-listed individuals are requested to be removed as inventors because they are not inventors of the pending claims, as amended in the Response to Restriction, mailed January 21, 2003.

Please deduct the petition fee, pursuant to 37 CFR § 1.17(i), of \$130 from Deposit Account No. 20-1430 of the undersigned. Please charge any additional fees or credit overpayment to the above Deposit Account.

02/25/2003 MBELETE1 00000015 201430 09759815

01 FC:1460

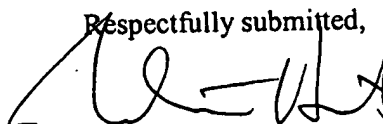
130.00 CH



Potts *et al.*
Application No.: 09/759,815
Page 2

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned attorney at (415) 576-0200.

Respectfully submitted,



Matthew E. Hinsch
Reg. No. 47,651

TOWNSEND and TOWNSEND and CREW, LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
(415) 576-0200
(415) 576-0300 (facsimile)